

Extrusion die

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Classification:

- **international:** B29B9/06; B29B9/02; (IPC1-7): B29B1/02

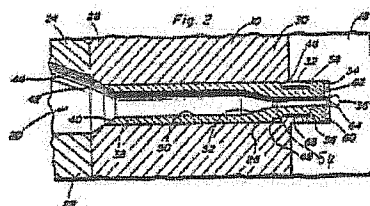
- **European:** B29B9/06B

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Abstract of DE 3243332 (A1)

In an underwater pellet producer which produces plastic pellets from a molten polymer which is ejected through extruder openings or die plate holes and in the process comminuted by a knife arrangement into pellets, thermal inserts which are made of a metal with very high thermal conductivity and are disposed in the die bores are used in order to reduce the thermal gradient that exists between the upstream side and the downstream side of the die plate by conducting heat from the molten polymer plastic at the upstream side to the downstream side and thereby reducing or preventing the risk of freezing off at the extruder openings at the downstream side, which is usually caused by the fact that the water solidifies the molten polymer before emergence from the die plate, so that the extruder opening is partly or completely blocked. The downstream side of the die plate has a layer of a metal of low thermal conductivity, so that the greatest part of the temperature drop, which necessarily must result between the upstream and the downstream side of the die plate, occurs at the downstream side of the plate and not through the complete thickness of the plate. A thin annular air gap is provided between the thermal insert and the body of the die plate in the region of the downstream side of the plate in order to permit thermal insulation between the downstream side of the die plate and the insert of high thermal conductivity.



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